

shortly acuminate; a slightly-curved keel defines the dorsal area, which is striated and moderately impressed; the lunule is very narrow and defined.

The concentric liræ are regular, about 30, stout, elevated, and compressedly-rounded, separated by a little wider, flat furrows; they are slightly incurved as they approach the anterior margin, and more conspicuously so towards the posterior keel, though there is no appearance of a second keel.

Dimensions.—Antero-posterior, 8; umbo-ventral, 5; sectional diameters, 3·5 mm.

Numerous examples dredged in life by Dr. Verco (after whom the species is named) in Yankalilla Bay; also in shell-sand, Holdfast Bay (*R. T.*).

This is not the young of *L. crassa*, which at the same size has a well-pronounced second keel defining the rostral area. It makes an approach to *L. Dohrni*, Hanley, but has not so straight a hinge-line, and is more convex.

A SECOND SUPPLEMENT TO A LIST OF THE LAMELLIBRANCH AND PALLIOBRANCH MOL- LUSCA OF SOUTH AUSTRALIA.

By PROFESSOR RALPH TATE, F.L.S., F.G.S.

[Read September 8, 1891.]

Chiefly through the dredging operations conducted by Dr. Verco during the past summer several additions have been made to the Lamellibranch-fauna of South Australian waters; several of these are of extreme interest, and I am constrained to found no less than six new species, which are described in the preceding pages.

Addenda and corrigenda to previously recorded species are placed within brackets.

Thracia speciosa, *Angas*, Proc. Zool. Soc., 1869, t. 2, fig. 12, p. 48.

Compared with *T. modesta*, this species is oblong and more inequilateral.

A left valve, dredged at 12 fathoms in Yankalilla Bay by Dr. Verco, agrees fairly well with Angas' figure of his *T. speciosa*, though its anterior side is longer, and the height is slightly less. Length, 19·5 mm.; height, 10·5.

Hemimactra cretacea, *Angas*.

Ref.—*Spisula cretacea*, Angas, Proc. Zool. Soc., 1867, t. 44, fig. 6.

Closely resembles *Anapa triquetra*, but differs generically and particularly by the lateral teeth being striated.

Dead shells, Encounter Bay (*Adcock*) and Aldinga Bay (*Kimber*). The identification is based on the comparison with authentic specimens from the locality of the type.

[Lutraria oblonga, *Gmelin*.

Mr. G. B. Sowerby in Journal of Conchology, October, 1889, p. 155, writes that "This species, under various names, seems to range from the west coast of Ireland eastward to the Philippine Islands, and southward to the Cape. It is taken for granted by most authors that those found in Australian and Indo-Pacific waters must be specifically distinct from the European, but I can find no reliable character by which to distinguish them."

After a careful study of numerous examples of our *Lutrariæ* and comparison with authentic specimens of *L. oblonga*, I concur with Mr. Sowerby's views, and express the opinion that one species only exists in our waters; therefore the names *L. rhynchena* and *L. dissimilis* must be relegated to the long catalogue of synonyms under *L. oblonga*. Menke in Moll. Nov. Hollandiæ, p. 46, 1843, would seem to have been the first to identify an Australian *Lutraria* with the European species, as he records *L. solenoides*, Lamarek, (a recognized synonym of *L. oblonga*) from the west coast of Australia.]

Semele monilis, *Tate, antea*, p. 261.

Aldinga, Moonta, and Yankalilla Bays.

Tellina Vincentiana, *Tate, antea*, p. 262.

Off Rapid Head and Myoponga, and Yankalilla Bay in St. Vincent-Gulf.

[Tellina modestina, *Tate, nom. mut.*

Tellina modesta, Sowerby, 1883; non Carpenter (*Angulus modesta*), Proc. Acad. Nat. Sc. Philadelphia, p. 56, 1865; *T. modesta* (Carp.), Bertin, Nouv. Arch. du Mus., 1878, p. 274.]

Lucinopsis pellucida, *Tate, antea*, p. 263.

Yankalilla Bay, St. Vincent-Gulf.

Chione striatissima, *Sowerby*.

Ref.—*Venus striatissima*, Sowerby, Thes. Conch., p. 718, t. 157, figs. 103-105; *id.*, Reeve, Conch. Icon., t. 26, f. 135, 1864; *Chione striatissima*, Deshayes.

This species, which is not uncommon in St. Vincent-Gulf and

Encounter Bay, ranging from 10 to 25 fathoms, and not rare as a beach-shell, has been incorrectly referred by me as the young of *C. gallinula*, whereas, at the time, I did not actually know juvenile states of that species.

[*Kellia rotunda*, *Deshayes*.

An examination of living examples proves the presence of a broad and short respiratory canal, proper to *Kellia*. Mr. Adcock reports to me that the species inhabits the interior of freshly-deserted egg-cases of sharks; often many examples, from the state of fry to that of the adult, occur, clinging by byssal threads to the surface of the egg-case. Woodward says that *Kellie* creep about freely, and fix themselves by a byssus at pleasure.]

[GENUS EPHIPPODONTA.

My description of the animal of *E. McDougalli* proves on examination of less distorted specimens (in spirit) to be incorrect. The mantle-lobes are united, except for a length of about one-third of the animal, at the anterior medial line. The mantle has, however, a narrow marginal reflection coincident with the shell-border; the marginal reflections of each lobe imbricate before and behind, they are papillary externally and shortly ciliate-fringed on the edge. The inner pair of gills are very large and tumidly swollen, they are united behind. The adductor muscles are in near proximity to the hinge-line.

Through the slit of the united mantle-lobes a pointed cylindrical foot and the thickened margins of the inner gills are partially protruded; or the latter, when concealed, produce large swellings of the mantle, these I mistook for a creeping disk.

These characters bring the genus in close relation to *Scintilla*.]

Crassatella carnea, *Tate, antea*, p. 263.

Yankalilla Bay and to north of Rapid Bay (*Dr. Verco*).

Unio Novæ-Hollandiæ, *Gray*.

Ref.—*Proc. Zool. Soc.*, 1834, p. 57.

Unio cucumoides, *Lea*, 1840, and *Obs.*, vol. III., p. 30, t. 7, fig. 2, 1843; *id.* *Reeve, Conch. Icon.*, 1868, t. 20, fig. 89.

A black, elongate, narrow, very plicate shell, attenuated and narrowly truncated posteriorly.

Length, $3\frac{1}{2}$ inches; breadth, $1\frac{1}{4}$ inch.

Lagoon near Alice Springs (coll. Mr. Adcock).

The identification is based on *Reeve's* figure of *U. cucumoides*, though the specimen wants the diversely radiating wrinkled-warts on the posterior side, as described by *Gray* and *Reeve*. *Smith* positively affirms the identity of this species and *U. cucum-*

oides, and is therefore known from the Macquarie, Hunter, and Richmond Rivers.

[*Carditella subtrigona*, *Tate*.

Many living examples of this species were dredged by Dr. Verco in Yankalilla Bay. The shell is covered with a thin epidermis of a pale-horn colour, varied with a more or less diffused flesh-tint. The largest examples have the following dimensions:—Antero-posterior, 7·75; umbo-ventral, 7; and sectional diameters, 5.]

Cardita Gunni, *Deshayes*.

Proc. Zool. Soc., 1852, p. 101; *C. Atkinsoni*, Ten.-Woods.

A suborbicular cordate shell, with from 17 to 19 nodosely squamose ribs about as wide as the furrows. Long., 13; lat., 12 mm.

In deep water off Kangaroo Island; Yankalilla Bay; Encounter Bay; also Tasmania.

Leda Verconis, *Tate*, *antea*, p. 264.

Yankalilla Bay; Holdfast Bay.

Pectunculus sordidus, *Tate*, *antea*, p. 264.

Off Rapid Head, St. Vincent-Gulf.

[*Pectunculus Gealei*, *Angas*.

Proc. Zool. Soc., 1873, t. 20, fig. 5, p. 183.

P. flabellatus, Ten.-Woods, Trans. Roy. Soc., Vict., 1878, p. 61.

P. laticostatus, Angas, P.Z.S., 1878, p. 871.

P. orbicularis, Angas, P.Z.S., 1879, t. 35, fig. 9, p. 420.

P. Beddomei, E. A. Smith, Lamell. Challenger Ex., 1885, p. 255, t. 18, figs. 1-1b.

There is no doubt that *P. flabellatus* and *P. Beddomei* are the same, though Woods' diagnosis is not satisfactory; however, the excellent figure of *P. Gealei* (a New South Wales shell) permits one to refer, without hesitation, the species of Woods and Smith to it. *P. orbicularis*, described from a Bass-Straits shell, represents a young stage of the same species, which is remarkable for its long straight hinge-line.]

Modiola arborescens, *Chemnitz*.

Mytilus arborescens, Chemnitz, Conch. Cab., vol. 2, t. 198, f. 2016-17.

Modiola arborescens, Reeve, Con. Icon., t. 6, f. 30 (1857).

Modiola picta, Lamarck, An. S. Vert., vol. VI., p. 112 (1819); id. Sowerby, Genera of Shells, fig. 1.

A compressedly-convex cylindrically-oblong shell, white under a pale-yellow highly glossy epidermis, the posterior slope divaricately netted with fine purplish lines.

One valve dredged off Troubridge by Mr. E. H. Matthews; several living specimens and detached valves dredged at 14 to 17 fathoms in Yankalilla Bay by Dr. Verco. The largest example measures 30 mm. long by 12 mm. broad.

The habitat of the species was unknown to Lamarck, but he gives Atlantic Ocean with a doubt, Deshayes in 1836 simply repeats him. Reeve refers the species to the West Indies.

This beautiful mussel is, however, recorded by Tenison-Woods, Proc. Roy. Soc., Tasmania, as very rare in Long Bay, Tasmania, and of about 45 mm. long. The South Australian examples are much smaller, but otherwise are comparable with Reeve's figure. Mr. John Brazier writes me, "I dredged *Modiola arborescens* outside Sydney Heads, some 17 years ago, in 45 fathoms, also inside Port Jackson in 18 fathoms."

***Terebratula Wyvillei*, Davidson.**

Ref.—Challenger Brach., t. 2, fig. 7-8; id. Trans. Lin. Soc., 1886, t. 2, f. 8-14.

Off South Australia, lat. 42° 42', long. 134° 10', depth 2,600 fathoms.

Also Chili, Patagonia, and Falkland Islands.

EXPLANATION TO PLATE XI.

- Fig.
 1-1a. *Crassatella carnea*. Slightly enlarged.
 2. *Lucinopsis pellucida*. 2 x.
 3. *Latirofuscus nigrofuscus*. 2 x.
 4. *Leda Verconis*. 3 x.
 5. *Leiopyrga octona*. 3 x.
 6. *Siphonalia oligostira*. Nat. size.
 7-7a. *Semele monilis*. Nat. size, and magnified portion.
 8. *Pectunculus sordidus*. 2 x.
 9. *Diala magna*. 3 x.
 10. *Tellina Vincentiana*. 2 x.
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